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Examiner Name	William D. Hutton Jr.
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ENCLOSURES ***(check all that apply)***

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
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- ☒ Other Enclosure(s) *(please identify below):*
  - Amended Appeal Brief with Appendixes (37 pgs)
  - Return Postcard.

Remarks: The original Appeal Brief was filed with fees on August 11, 2005 and it is requested that the fees previously paid for with the original Appeal Brief be applied to this Amended Appeal Brief. To the extent necessary, if any fees are due with this submission, the Commissioner is hereby authorized to charge any fee shortages to Deposit Account No. 50-1302.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Hickman Palermo Truong & Becker LLP Edward A. Becker, Reg. No. 37,777
Signature	
Date	April 21, 2006

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Confirmation No. 8312

Tomotoshi Sato Group Art Unit No.: 2179

Serial No.: 09/668,005 Examiner: William D. Hutton, Jr.

Filed: September 21, 2000

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AMENDED APPEAL BRIEF

Sir:

This Amended Appeal Brief is submitted in response to the Notification of Non-Compliant Appeal Brief mailed on March 22, 2006 and the Order Returning Undocketed Appeal to Examiner issued by the Board of Patent Appeals and Interferences mailed on March 9, 2006. The content of this Amended Appeal Brief is identical to the content of the Appeal Brief filed on August 11, 2005, except that an Evidence Appendix and a Related Proceedings Appendix have been added, both indicating "None".

I. REAL PARTY IN INTEREST

Ricoh Company Ltd. is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-76 are pending in this application, were finally rejected in the Final Office Action mailed on February 11, 2005 and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

Amendments to the claims were included in the reply filed on March 16, 2005 in response to the Final Office Action mailed on February 11, 2005, but the amendments were not entered by the Examiner as indicated in the second Advisory Action mailed on April 1, 2005. Thus, the claims included in the claims appendix filed with this appeal brief stand as amended with the Request for Continued Examination (RCE) filed on January 18, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application contains independent Claims 1, 19, 26, 27, 28, 63 and 70 that are directed generally to an approach for previewing an electronic document. According to the approach recited in Claims 1, 19, 26, 27, 28, 63 and 70, document information associated with an electronic document is transmitted from a client to a printing device. Upon receiving the document information, the printing device generates preview document data based on the received document information and one or more characteristics that are associated with the selected printing device and generally not available at the requesting client. The preview document data is then transmitted to the client from the printing device to cause a preview version of the electronic document to be displayed at the client. Specification, Pages 4, 6, 8-10 and 14-17 and FIGS. 1A, 1B, 2 and 3.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-12, 14-39, 41-56 and 58-76 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Blumberg et* al., U.S. Patent Application Publication No. US 2003/0140315 A1 (hereinafter "*Blumberg*").

2. Claims 13, 40 and 57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Blumberg*.

VII. ARGUMENTS

A. Introduction

It is well founded that a claim is anticipated only if each and every element as set forth in a claim is either expressly or inherently described in a prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2 1051 (Fed. Cir. 1987). It is also well founded that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the references cited and relied upon must teach or suggest all the claim limitations. In addition, a sufficient factual basis to support the obviousness rejection must be proffered. *In re Freed*, 165 USPQ 570 (CCPA 1970); *In re Warner*, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 148 USPQ 721 (CCPA 1966).

With respect to the present application, it is respectfully submitted that Claims 1-76 include one or more limitations that are not taught or suggested by *Blumberg*. It is further submitted that a sufficient factual basis has not been proffered during the prosecution of the present application to support the rejection of Claims 1-12, 14-39, 41-56 and 58-76 under 35 U.S.C. § 102(e) as being anticipated by *Blumberg* or the rejection of Claims 3, 40 and 57 under 35 U.S.C. § 103(a) as being unpatentable over *Blumberg*.

B. Claims 1-12, 14-39, 41-56 and 58-76 Are Patentable Over *Blumberg*

It is respectfully submitted that Claims 1, 2, 9-14, 21-24, 26, 27 and 34-37 are patentable over *Blumberg* because Claims 1, 2, 9-14, 21-24, 26, 27 and 34-37 include one or more limitations that are not in any way taught or suggested by *Blumberg*.

CLAIM 1

Claim 1 is directed to a method for previewing an electronic document that recites:

"generating the electronic document at a client;
transmitting document information associated with the electronic document from the client to a printing device having a print process for generating hard-copy printouts of electronic documents at the printing device;
the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client;
the printing device transmitting the preview document data to the client; and
previewing the electronic document at the client based on the preview document data received from the printing device."

The method recited in Claim 1 includes a printing device generating preview document data and transmitting the preview document data to a client, where the preview document data is used to preview the electronic document. In particular, Claim 1 recites that the method includes "the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client." Claim 1 also recites the "printing device having a print process executing thereon for generating hard-copy printouts of electronic documents at the printing device." It is respectfully submitted that *Blumberg* does not in any way teach or suggest a method for previewing an electronic document that includes a printing device performing these functions.

i. *Blumberg* Does Not Teach or Suggest The Claim 1 Limitations "the printing device generating preview document data ..." and "the printing device transmitting the preview document data to the client"

Blumberg describes a system for providing on-demand on-line printing services that allows a user to preview how a finished document will look. More specifically, in *Blumberg*, virtual builder software allows a user to preview how a finished document will look with selected finishing options applied. *Blumberg*, Paragraphs [0009], [0010], [0059] *et al.* To the extent that *Blumberg* in any way teaches or suggests "generating preview document data" as recited in Claim 1, it is in the context of the virtual builder software 220, 230 generating previews of documents with selected finishing options. *Blumberg* does not teach or suggest any other mechanism or process that generates preview document data.

According to *Blumberg*, the virtual builder software "can reside on client computers or server computers, or preferably both." *Blumberg* at paragraph 0060, lines 2-3. As depicted in FIG. 2 and described in paragraphs [0142] through [0149], the virtual builder software 220 can reside on on-demand print server 210 in corporate intranet 200. As depicted in FIG. 3 and described in paragraphs [0150] through [0153], the virtual builder software 320 can be part of on-demand print service 310 in on-line on-demand print facility 300.

Blumberg does not teach or suggest however, that the virtual builder software can reside on a printing device. The figures of *Blumberg* do not depict the virtual builder software 220, 320 executing on a printing device and there is nothing in the text of *Blumberg* to teach or suggest that the virtual builder software 220, 320 could be implemented on a printing device. The only printing devices in *Blumberg* are local printer 260 and printing devices located at the corporate reproduction center 280, local reproduction center 370 and remote production center 380.

Blumberg does not in any way teach or suggest that these printing devices can execute the virtual builder software or otherwise be configured to generate preview document data and provide the preview document data to a client, as recited in Claim 1.

In view of the foregoing, it is respectfully submitted that none of the printing devices disclosed in *Blumberg* participate in generating document preview data. Accordingly, it is respectfully submitted that at least the Claim 1 limitations "the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client" and "the printing device transmitting the preview document data to the client" are not taught or suggested by *Blumberg* and that Claim 1 is therefore patentable over *Blumberg*.

Throughout the prosecution of the present application, the Examiner has failed to identify how *Blumberg* in any way teaches or suggests a method for previewing an electronic document that includes a "printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client" and "the printing device transmitting the preview document data to the client" with the "printing device having a print process for generating hard-copy printouts of electronic documents at the printing device" as recited in Claim 1.

In the first Final Office Action (Pages 19-20) mailed on September 17, 2004, the Examiner asserted that on-demand print server 210 was the "printing device" recited in Claim 1 and that virtual builder 220 residing on on-demand print server 210 caused on-demand print server 210 to perform the functionality recited in Claim 1. In the remarks accompanying the

Request for Continued Examination (RCE) filed on January 18, 2005 (Page 22), the Applicant pointed out that on-demand print server 210 is described in *Blumberg* in the context of a conventional server for managing documents, without any printing capabilities. The Applicant also pointed out that *Blumberg* does not teach or suggest that on-demand print server 210 includes a "print process for generating hard-copy printouts of electronic documents," as recited by Claim 1, and that on-demand print server 210 cannot therefore be the "printing device" as recited in Claim 1.

The second Final Office Action mailed on February 11, 2005 (Pages 22-24) included a "Response to Arguments" section that asserted "[i]n other words, the entire system of *Blumberg* is the 'printing device' and all of its parts are part of a 'print process' that generates hard-copy printouts of electronic documents." It is respectfully submitted that this is an incorrect interpretation of *Blumberg*. The system of *Blumberg* includes a corporate intranet 200 (FIG. 2), an on-line on-demand print facility 300 (FIG. 3), a remote production center 380 (FIG. 3) and a client computer 400 (FIG. 4) communicatively coupled via the Internet. These elements of the system of *Blumberg* do not in any way together constitute a printing device. *Blumberg* does not in any way teach or suggest that the entire system of *Blumberg* is a printing device. Furthermore, one of ordinary skill in the art would not consider the entire system of *Blumberg*, including the corporate intranet 200, the on-line on-demand print facility 300, the remote production center 380 and the client computer 400, to be a printing device, since printing devices do not conventionally include these types of networks and systems. Also, interpreting the entire system of *Blumberg* to be a printing device is inconsistent with the disclosure of *Blumberg*, since *Blumberg* explicitly teaches that some of these elements of the system of *Blumberg* themselves include printing devices. For example, the corporate intranet 200 includes the local printer 260

and the corporate reproduction center 280 that may include printing devices. FIG. 2 and Paragraphs [0142] through [0149]. As another example, the on-line on-demand print facility 300 includes the local production center 370 that may include printing devices. FIG. 3 and Paragraphs [0150] through [0153]. Finally, the remote production center 380 may include printing devices. Therefore, the entire system of *Blumberg* does not in any way constitute a printing device as asserted by the Examiner.

In view of the foregoing, it is respectfully submitted that none of the printing devices disclosed in *Blumberg* participate in generating document preview data and therefore that the Claim 1 limitations a "printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client" and "the printing device transmitting the preview document data to the client" are not taught or suggested by *Blumberg*.

ii. *Blumberg* Does Not Teach or Suggest The Claim 1 Limitation "the printing device generating preview document data based on the document information *and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client*"

Notwithstanding the foregoing, even if *Blumberg* somehow taught or suggested that the virtual builder software could be executed on a printing device, or that the entire system of *Blumberg* was considered to be a printing device, the Claim 1 limitations "the printing device generating preview document data based on the document information *and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client*" (emphasis added) are not taught or

suggested by *Blumberg*. In the Final Office Action mailed on February 11, 2005, the Examiner asserted "*Blumberg* discloses this limitation in that the computerized printing system comprises Virtual Builder, which allows the user to preview the finished document based on user-selected finishing options that are not available at the client; see the various finishing options in Paragraphs 0067-0071." Final Office Action, Page 4. Applicant respectfully disagrees.

Blumberg does not teach or suggest previewing a document using the virtual builder software based upon user-selected finishing options that are not available at the client. All of the user-selected finishing options described in *Blumberg* are indeed user-selected and available at the client. Whether a user uses the virtual builder software 220 via document authoring tool 240 (FIG. 2), the virtual builder software 420 on client 400 (FIG. 4), or the virtual builder software at some other location, all of the user-selected finishing options are user-selectable and available to the user at the user's client user interface, wherever that may be. Thus, all of the user-selectable finishing options are available at the client. Paragraphs [0058] through [0106] of *Blumberg* relied upon by the Examiner describe user-selected finishing options accessible by a user via the user's client. There is absolutely no teaching or suggestion in *Blumberg* that the virtual builder software generates a preview of a document based upon "a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client." It is therefore respectfully submitted that this Claim 1 limitation is also not taught or suggested by *Blumberg*.

In view of the foregoing, it is respectfully submitted that at least the Claim 1 limitations "the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client" and "the printing device

transmitting the preview document data to the client" are not taught or suggested by *Blumberg* and that Claim 1 is therefore patentable over *Blumberg*.

CLAIMS 2-12 AND 14-18

Claims 2-12 and 14-18 all depend from Claim 1 and include all of the limitations of Claim 1. It is therefore respectfully submitted that Claims 2-12 and 14-18 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claim 1. Furthermore, it is respectfully submitted that Claims 2-12 and 14-18 recite additional limitations that independently render them patentable over *Blumberg*.

CLAIM 19

Claim 19 is directed to a method for previewing an electronic document that recites a printing device that includes "a print process executing thereon for generating hard-copy printouts of electronic documents at the printing device." Claim 19 also recites that the printing device generate "preview document data based on the document information and a set of one or more specific characteristics associated with the printing device." As set forth herein with respect to Claim 1, *Blumberg* does not teach or suggest a method for previewing an electronic document that includes the use of a printing device to generate preview document data. It is therefore respectfully submitted that Claim 19 includes one or more limitations that are not in any way taught or suggested by *Blumberg* and is therefore patentable over *Blumberg*.

CLAIMS 20-25

Claims 20-25 all depend from Claim 19 and include all of the limitations of Claim 19. It is therefore respectfully submitted that Claims 20-25 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claim 19.

CLAIMS 26-28

Claims 26-28 recite limitations similar to Claim 1, except in the context of a computer-readable medium, a system and a document preview apparatus. It is therefore respectfully submitted that Claims 26-28 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claim 1.

CLAIMS 29-39 AND 41-45

Claims 29-39 and 41-45 all depend from Claim 26 and include all of the limitations of Claim 26. It is therefore respectfully submitted that Claims 29-39 and 41-45 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claim 26.

CLAIMS 46-56 AND 58-62

Claims 46-56 and 58-62 all depend from Claim 27 and include all of the limitations of Claim 27. It is therefore respectfully submitted that Claims 46-56 and 58-62 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claim 27.

CLAIMS 63-69

Claims 63-69 recite limitations similar to Claims 19-25, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 63-69 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claims 19-25.

CLAIMS 70-76

Claims 70-76 recite limitations similar to Claims 19-25, except in the context of apparatuses. It is therefore respectfully submitted that Claims 70-76 are patentable over *Blumberg* for at least the reasons set forth herein with respect to Claims 19-25.

In view of the foregoing, it is respectfully submitted that Claims 1-12, 14-39, 41-56 and 58-76 are patentable over *Blumberg*.

C. Claims 13, 40 and 57 Are Patentable Over *Blumberg*

Claims 13, 40 and 57 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Blumberg* in view of *Bando*, U.S. Patent No. 6,449,053. It is respectfully submitted that Claims 13, 40 and 57 are patentable over *Blumberg* and *Bando*, alone or in combination, for at least the reasons provided hereinafter.

Claim 13 depends from Claim 1 and includes all of the limitations of Claim 1. As previously set forth herein, Claim 1 includes one or more limitations that are not taught or suggested by *Blumberg*. These limitations are also recited in Claim 13. In the first Advisory Action mailed November 24, 2004, the Examiner noted that *Bando* is not relied upon for teaching the Claim 1 limitation of generating preview document data at the printing device. Applicant agrees that *Bando* does not teach or suggest this limitation. Accordingly, given the arguments provided herein that Claim 1 recites one or more limitations not taught or suggested

by *Blumberg*, it is respectfully submitted that Claim 13 also includes one or more limitations not taught or suggested by *Blumberg* or *Bando*, considered alone or in combination, and that Claim 13 is therefore patentable over *Blumberg* and *Bando*.

Claims 40 and 57 recite limitations similar to Claim 13, except in the context of a computer-readable medium and an apparatus, respectively. It is therefore respectfully submitted that Claims 40 and 57 are patentable over *Blumberg* and *Bando* for at least the reasons set forth herein with respect to Claim 13.

In view of the foregoing, it is respectfully submitted that Claims 3-8, 15-20 and 28-33 are patentable over *Blumberg* since each of these claims includes one or more limitations that are not in any way taught or suggested by *Blumberg*.

VIII. CONCLUSION AND PRAYER FOR RELIEF

Based on the foregoing, it is respectfully submitted that the rejection of 1, 2, 9-14, 21-24, 26, 27 and 34-37 under 35 U.S.C. § 102(e) as being anticipated by *Blumberg* lacks the requisite factual and legal bases. Appellants therefore respectfully request that the Honorable Board reverse the rejection of Claims 1, 2, 9-14, 21-24, 26, 27 and 34-37 under 35 U.S.C. § 102(e) over *Blumberg*. It is further respectfully submitted that the rejection of Claims 3-8, 15-20 and 28-33 under 35 U.S.C. § 103(a) as being unpatentable over *Blumberg* lacks the requisite factual and legal bases. Appellants also therefore respectfully request that the Honorable Board reverse the rejection of Claims 3-8, 15-20 and 28-33 under 35 U.S.C. § 103(a) over *Blumberg*.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Edward A. Becker
Reg. No. 37,777
Date: April 21, 2006

2055 Gateway Place, Suite 550
San Jose, California 95110
Tel: (408) 414-1204
Fax: (408) 414-1076

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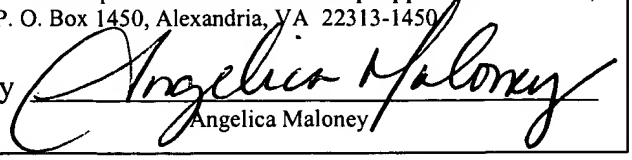
On April 21, 2006 By 
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CLAIMS APPENDIX

1. A method for previewing an electronic document, the method comprising:

generating the electronic document at a client;

transmitting document information associated with the electronic document from the client to a printing device having a print process for generating hard-copy printouts of electronic documents at the printing device;

the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client;

the printing device transmitting the preview document data to the client; and

previewing the electronic document at the client based on the preview document data received from the printing device.

2. The method as recited in Claim 1, wherein:

the printing device is a multi-functional printer (MFP); and

the step of transmitting document information includes transmitting document information to the MFP.

3. The method as recited in Claim 1, wherein:

the document information is Page Description Language (PDL) data; and

the step of transmitting document information includes transmitting PDL data from the client to the printing device.

4. The method as recited in Claim 1, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

5. The method as recited in Claim 1, wherein the step of generating preview document data at the printing device includes generating a bitmap image at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

6. The method as recited in Claim 1, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

7. The method as recited in Claim 6, wherein the one or more different paper characteristics includes one or more paper type characteristics, wherein the one or more paper type characteristics indicate a specific type of paper that has been for printing the electronic document.

8. The method as recited in Claim 6, wherein the one or more different paper characteristics includes one or more paper color characteristics, wherein the one or more paper color

characteristics indicate a specific color of paper that has been for printing the electronic document.

9. The method as recited in Claim 1, wherein

the printing device supports one or more different fonts that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different fonts that are available for printing electronic documents.

10. The method as recited in Claim 1, wherein

the printing device is associated with one or more different stapling characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different stapling characteristics that are available for selection.

11. The method as recited in Claim 1, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

12. The method as recited in Claim 1, wherein

the client includes a print driver that is associated with the printing device; and

the set of one or more specific characteristics that are unavailable at the client includes one or more characteristics that are unknown to the print driver.

13. The method as recited in Claim 1, wherein

the client includes a print driver that is associated with the printing device, wherein the print driver is associated with one or more print driver attributes that are not supported by the printing device; and

the step of generating preview document data at the printing device includes the step of translating one or more of the one or more print driver attributes into one or more printing device attributes that are supported by the printing device.

14. The method as recited in Claim 1, wherein the step of generating preview document data at the printing device further includes the steps of:

determining the resolution of a display device that is associated with the client; and

generating the preview document data based on the resolution of the display device.

15. The method as recited in Claim 1, wherein

the step of generating preview document data at the printing device

includes the steps of generating two-dimensional (2-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 2-D.

16. The method as recited in Claim 1, wherein

the step of generating preview document data at the printing device

includes the steps of generating three-dimensional (3-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 3-D.

17. The method as recited in Claim 1, wherein

the step of generating preview document data at the printing device includes the steps of generating HyperText Markup Language (HTML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the HTML data to the client from the printing device.

18. The method as recited in Claim 1, wherein

the step of generating preview document data at the printing device includes the steps of generating Extensible Markup Language (XML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the XML data to the client from the printing device.

19. A method for previewing an electronic document, the method comprising:

receiving from a client at a printing device document information associated with an electronic document, wherein the printing device includes a print process for generating hard-copy printouts of electronic documents at the printing device;

the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device; and

the printing device transmitting to the client the preview document data for causing a display unit associated with the client to display a preview version of the electronic document.

20. The method as recited in Claim 19, wherein:

the document information is Page Description Language (PDL) data; and

the step of receiving document information includes receiving PDL data at the printing device.

21. The method as recited in Claim 19, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

22. The method as recited in Claim 19, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

23. The method as recited in Claim 19, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

24. The method as recited in Claim 19, wherein the step of generating preview document data at the printing device further includes the steps of:

determining a display resolution of the display device that is associated with the client; and

generating the preview document data based on the display resolution of the display device.

25. The method as recited in Claim 19, wherein

the step of generating preview document data at the printing device

includes generating three-dimensional (3-D) preview document data; and

the step of transmitting to the client the preview document data includes transmitting preview document data that causes the preview version of the electronic document to be displayed in 3-D on the display unit associated with the client.

26. A computer-readable medium carrying one or more sequences of instructions for previewing an electronic document, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform:

generating the electronic document at a client;

transmitting document information associated with the electronic document from the client to a printing device having a print process for generating hard-copy printouts of electronic documents at the printing device;

the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing

device, wherein the set of one or more specific characteristics are unavailable at the client;

the printing device transmitting the preview document data to the client; and

previewing the electronic document at the client based on the preview document data received from the printing device.

27. A system for previewing an electronic document, comprising:

one or more processors;

one or more memories coupled to the one or more processors; and

one or more sequences of instructions stored in the one or more memories, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the steps of:

receiving from a client at a printing device, having a print process for generating hard-copy printouts of electronic documents at the printing device, document information associated with the electronic document;

the printing device generating preview document data based on the document information and a set of one or more specific characteristics associated with the printing device, wherein the set of one or more specific characteristics are unavailable at the client;

the printing device transmitting the preview document data to the client for displaying a preview version of the electronic document at the client.

28. A document preview apparatus comprising:

a memory for storing characteristics that are associated with the document preview apparatus, wherein the characteristics are unavailable to clients that are connected to the document preview apparatus;

a print process for generating hard-copy printouts of electronic documents at the document preview apparatus; and

one or more processors that are configured for

receiving, from a client, document information associated with an electronic document;

generating, at the document preview apparatus, preview document data based on the document information and one or more of the characteristics associated with the document preview apparatus; and

transmitting to the client the preview document data for causing a display unit associated with the client to display a preview version of the electronic document.

29. The computer-readable medium as recited in Claim 26, wherein:

the printing device is a multi-functional printer (MFP); and

the step of transmitting document information includes transmitting document information to the MFP.

30. The computer-readable medium as recited in Claim 26, wherein:

the document information is Page Description Language (PDL) data; and

the step of transmitting document information includes transmitting PDL data from the client to the printing device.

31. The computer-readable medium as recited in claim 26, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

32. The computer-readable medium as recited in claim 26, wherein the step of generating preview document data at the printing device includes generating a bitmap image at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

33. The computer-readable medium as recited in Claim 26, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

34. The computer-readable medium as recited in Claim 33, wherein the one or more different paper characteristics includes one or more paper type characteristics, wherein the one or more paper type characteristics indicate a specific type of paper that has been for printing the electronic document.

35. The computer-readable medium as recited in Claim 33, wherein the one or more different paper characteristics includes one or more paper color characteristics, wherein the one or

more paper color characteristics indicate a specific color of paper that has been for printing the electronic document.

36. The computer-readable medium as recited in Claim 26, wherein

the printing device supports one or more different fonts that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different fonts that are available for printing electronic documents.

37. The computer-readable medium as recited in Claim 26, wherein

the printing device is associated with one or more different stapling characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different stapling characteristics that are available for selection.

38. The computer-readable medium as recited in Claim 26, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

39. The computer-readable medium as recited in Claim 26, wherein

the client includes a print driver that is associated with the printing device; and

the set of one or more specific characteristics that are unavailable at the client includes one or more characteristics that are unknown to the print driver.

40. The computer-readable medium as recited in Claim 26, wherein

the client includes a print driver that is associated with the printing device, wherein the print driver is associated with one or more print driver attributes that are not supported by the printing device; and

the step of generating preview document data at the printing device includes the step of translating one or more of the one or more print driver attributes into one or more printing device attributes that are supported by the printing device.

41. The computer-readable medium as recited in Claim 26, wherein the step of generating preview document data at the printing device further includes the steps of:

determining the resolution of a display device that is associated with the client; and

generating the preview document data based on the resolution of the display device.

42. The computer-readable medium as recited in Claim 26, wherein

the step of generating preview document data at the printing device

includes the steps of generating two-dimensional (2-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 2-D.

43. The computer-readable medium as recited in Claim 26, wherein

the step of generating preview document data at the printing device

includes the steps of generating three-dimensional (3-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 3-D.

44. The computer-readable medium as recited in Claim 26, wherein

the step of generating preview document data at the printing device includes the steps of generating HyperText Markup Language (HTML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the HTML data to the client from the printing device.

45. The computer-readable medium as recited in Claim 26, wherein

the step of generating preview document data at the printing device includes the steps of generating Extensible Markup Language (XML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the XML data to the client from the printing device.

46. The system as recited in Claim 27, wherein:

the printing device is a multi-functional printer (MFP); and

the step of transmitting document information includes transmitting document information to the MFP.

47. The system as recited in Claim 27, wherein:

the document information is Page Description Language (PDL) data; and

the step of transmitting document information includes transmitting PDL data from the client to the printing device.

48. The system as recited in Claim 27, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

49. The system as recited in Claim 27, wherein the step of generating preview document data at the printing device includes generating a bitmap image at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

50. The system as recited in Claim 27, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

51. The system as recited in Claim 50, wherein the one or more different paper characteristics includes one or more paper type characteristics, wherein the one or more paper type characteristics indicate a specific type of paper that has been for printing the electronic document.

52. The system as recited in Claim 50, wherein the one or more different paper characteristics includes one or more paper color characteristics, wherein the one or more paper color

characteristics indicate a specific color of paper that has been for printing the electronic document.

53. The system as recited in Claim 27, wherein

the printing device supports one or more different fonts that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different fonts that are available for printing electronic documents.

54. The system as recited in Claim 27, wherein

the printing device is associated with one or more different stapling characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different stapling characteristics that are available for selection.

55. The system as recited in Claim 27, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

56. The system as recited in Claim 27, wherein

the client includes a print driver that is associated with the printing device; and

the set of one or more specific characteristics that are unavailable at the client includes one or more characteristics that are unknown to the print driver.

57. The system as recited in Claim 27, wherein

the client includes a print driver that is associated with the printing device, wherein the print driver is associated with one or more print driver attributes that are not supported by the printing device; and

the step of generating preview document data at the printing device includes the step of translating one or more of the one or more print driver attributes into one or more printing device attributes that are supported by the printing device.

58. The system as recited in Claim 27, wherein the step of generating preview document data at the printing device further includes the steps of:

determining the resolution of a display device that is associated with the client; and

generating the preview document data based on the resolution of the display device.

59. The system as recited in Claim 27, wherein

the step of generating preview document data at the printing device

includes the steps of generating two-dimensional (2-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 2-D.

60. The system as recited in Claim 27, wherein

the step of generating preview document data at the printing device

includes the steps of generating three-dimensional (3-D) preview document data; and

the step of displaying the preview version of the electronic document includes the step of displaying portions of the electronic document at the client in 3-D.

61. The system as recited in Claim 27, wherein

the step of generating preview document data at the printing device includes the steps of generating HyperText Markup Language (HTML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the HTML data to the client from the printing device.

62. The system as recited in Claim 27, wherein

the step of generating preview document data at the printing device includes the steps of generating Extensible Markup Language (XML) data at the printing device; and

the step of transmitting the preview document data to the client includes the step of transmitting the XML data to the client from the printing device.

63. A computer-readable medium for previewing an electronic document, the computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, cause the performance of:

receiving from a client at a printing device document information associated with an electronic document;

generating preview document data at the printing device based on the document information and a set of one or more specific characteristics associated with the printing device; and

transmitting to the client the preview document data for causing a display unit associated with the client to display a preview version of the electronic document.

64. The computer-readable medium as recited in Claim 63, wherein:

the document information is Page Description Language (PDL) data; and

the step of receiving document information includes receiving PDL data at the printing device.

65. The computer-readable medium as recited in claim 63, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

66. The computer-readable medium as recited in Claim 63, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

67. The computer-readable medium as recited in Claim 63, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

68. The computer-readable medium as recited in Claim 63, wherein the step of generating preview document data at the printing device further includes the steps of:

determining a display resolution of the display device that is associated with the client; and

generating the preview document data based on the display resolution of the display device.

69. The computer-readable medium as recited in Claim 63, wherein

the step of generating preview document data at the printing device includes generating three-dimensional (3-D) preview document data; and

the step of transmitting to the client the preview document data includes transmitting preview document data that causes the preview version of the electronic document to be displayed in 3-D on the display unit associated with the client.

70. An apparatus for previewing an electronic document, the apparatus comprising a memory storing instructions which, when executed by one or more processors, cause the performance of:

receiving from a client at a printing device document information associated with an electronic document;

generating preview document data at the printing device based on the document information and a set of one or more specific characteristics associated with the printing device; and

transmitting to the client the preview document data for causing a display unit associated with the client to display a preview version of the electronic document.

71. The apparatus as recited in Claim 70, wherein:

the document information is Page Description Language (PDL) data; and

the step of receiving document information includes receiving PDL data at the printing device.

72. The apparatus as recited in claim 70, wherein the step of generating preview document data at the printing device includes generating raster image data at the printing device based upon the document information and the set of one or more specific characteristics associated with the printing device.

73. The apparatus as recited in Claim 70, wherein

the printing device is associated with one or more different paper characteristics that are available for printing electronic documents; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different paper characteristics that are available for printing electronic documents.

74. The apparatus as recited in Claim 70, wherein

the printing device is associated with one or more different finishing characteristics that are available for selection; and

the set of one or more specific characteristics associated with the printing device includes one or more of the one or more different finishing characteristics that are available for selection.

75. The apparatus as recited in Claim 70, wherein the step of generating preview document data at the printing device further includes the steps of:

determining a display resolution of the display device that is associated with the client; and

generating the preview document data based on the display resolution of the display device.

76. The apparatus as recited in Claim 70, wherein

the step of generating preview document data at the printing device includes generating three-dimensional (3-D) preview document data; and

the step of transmitting to the client the preview document data includes transmitting preview document data that causes the preview version of the electronic document to be displayed in 3-D on the display unit associated with the client.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None